

# Attachment A

The testing was performed with [REDACTED] of ZVRS and [REDACTED] of Sorenson. The testing that occurred in this document took place on December 7, 2011.

The first call was from [REDACTED] at 2:10 PM. [REDACTED] called in using a Z4 on PC. They first asked if we had another ntouch VP that they could test with so that they could keep one on call for the whole duration of testing, while using the other for test calls of other endpoints of theirs. However, all of the other phones we had on production were on alpha builds, so we instead used Google Talk Chat. That conversation is saved in my scratch folder for those interested in the conversation. Once conversation with Google Chat was established, the first battery of testing commenced with outgoing calls to their endpoints (ntouch VP -> X), in the following order:

Z-4 on PC 2:14 PM with [REDACTED]

Z-20 2:17 PM with [REDACTED]

Z-340 2:19 with [REDACTED]

Z-OJO 2:22 with [REDACTED]

Z-150 2:24 with [REDACTED]

All connections were successful. Video streamed both ways. Conversations were short, such as "Can you see me?" and "What is the next test?", etc. After this we then called into their ZVRS system with [REDACTED] at 2:32 PM, which was successful. We then tested if the ntouch VP could leave a video mail (their version of SignMail) at 2:36 PM. From all indications that I could tell, it was successful.

The next battery of tests included the following of them calling ntouch VP (X -> ntouch VP) in the following order:

Z-4 on PC 2:47 PM with [REDACTED]

Z-20 2:50 PM with [REDACTED]

Z-340 2:52 PM with [REDACTED]

Z-OJO 2:53 PM with [REDACTED]

We then did ZVRS call ntouch VP 2x, once at 2:57 PM, and again at 2:58 PM, again with [REDACTED]. Neither had issues present. After this, they attempted to send me a video mail at 3:02 PM. When this test failed, [REDACTED] asked for how our P2P video messaging worked (more specifically, if it was a Sorenson Only thing) at 3:14 PM on a call with Z4 on PC. I replied that I knew that it worked from ntouch VP to ntouch VP, but that I was not a developer and that I was not familiar enough with the designs of how that works to answer the question properly. [REDACTED] then asked if the VP-200 can do the same as

ntouch VP (Deaf SignMail). I replied that no, it does not. When the call completed (on the endpoint), I also added in Google Talk that I was not familiar with the workings of video messaging to answer their questions. They then did a few more calls from Z4 on PC to my videophone, once at 3:15, 3:25, and 3:26 PM. These were done with [REDACTED]

# Attachment B

me: testing.

██████ helio!@

Sent at 2:09 PM on Wednesday

██████ ok, can you please call 727-██████

Sent at 2:10 PM on Wednesday

██████ did you get this message?

me: You can see us, yes?

██████ yes

we will start the capture soon

will need you to call back again... wait until we are ready

ok go ahead and hang up and call back

ok great...

ok go ahead and hang up

ok next number to call:

727-██████

ok done with that one hang up

Sent at 2:16 PM on Wednesday

██████ ok next number to call is: 727-██████

Sent at 2:18 PM on Wednesday

me: That was a Z-340, correct?

██████ yes that was a z340

soon ready for another test

Sent at 2:20 PM on Wednesday

██████ Next one is 727-██████

Sent at 2:21 PM on Wednesday

██████ ok can hang up

ok another test:

727-██████

ok hang up

another test:

will need a min or two to make a change then will do another test

ok

Sent at 2:26 PM on Wednesday

██████ sorry... still setting up for the next test

call 866-██████ (will see our front door)

Sent at 2:29 PM on Wednesday

██████ ok another call to see if you get our videomail

hold on..

Sent at 2:30 PM on Wednesday

██████ call this number and you should get videomail (let us know if looks OK to you)

Setting it up now... give us a minute

424-██████

Sent at 2:33 PM on Wednesday

██████ how did it go?

me: sorry, I'm trying now.

██████ ok

Sent at 2:36 PM on Wednesday

me: How did it go?

██████ ok you can hang up

we're looking now to make sure we got it

did you see the videomail

were you able to leave a message?

me: I was able to leave a message for you.

██████ great ok...

making sure we have it all now  
hold

Next, we'll be calling you  
so just be ready to answer the phone

me: I'm ready when you are.

Sent at 2:41 PM on Wednesday

██████ ok another call soon  
will need you to answer it

me: ok

Sent at 3:02 PM on Wednesday

██████ still setting it up

Sent at 3:07 PM on Wednesday

██████ calling you

Sent at 3:09 PM on Wednesday

me: ready when you are.

Sent at 3:10 PM on Wednesday

██████ will tell you when to call us  
sorry, will call you again first  
then will have you call us

Sent at 3:14 PM on Wednesday

██████ ok hold... will have you call us back

me: ok

Just send me the number.

Sent at 3:15 PM on Wednesday

██████ ok hold on  
setting up

Sent at 3:16 PM on Wednesday

██████ a few more mins

me: ok

So, just to be clear about the video mail thing. I'm not sure how all the design works on that.

Sent at 3:20 PM on Wednesday

██████ ok

ok you can go ahead and call us at the same number we just called you at

me: ok

Sent at 3:23 PM on Wednesday

██████ thanks very much for your time!!!

appreciate it all

me: No problem.

# Attachment C

[REDACTED]

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From: [REDACTED]@zvrs.com]  
Sent: Monday, December 05, 2011 1:05 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: RE: nTouchVP interoperability testing

[REDACTED]

Great! Just let us know what number to call you at on Wednesday at 2 PM Mountain time.

[REDACTED]

-----Original Message-----

From: [REDACTED]@sorenson.com]  
Sent: Friday, December 02, 2011 5:02 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: RE: nTouchVP interoperability testing

Perfect, we'll sync up next week to work out the details (phone numbers, etc.).

Have a great weekend!

[REDACTED]

-----Original Message-----

From: [REDACTED]@zvrs.com]  
Sent: Friday, December 02, 2011 2:54 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: Re: nTouchVP interoperability testing

[REDACTED]

Works for us!

[REDACTED]

On Dec 2, 2011, at 4:45 PM, [REDACTED]@sorenson.com> wrote:

> Hi [REDACTED]  
>  
> [REDACTED] is out of the office today, but it looks like Wed 12/7 after 2:00 Mountain time would work best for us.  
>  
> Does that work for you?  
>  
> Thanks,  
> [REDACTED]  
>

> -----Original Message-----

> From: [REDACTED]@zvrs.com]  
> Sent: Friday, December 02, 2011 2:39 PM  
> To: [REDACTED]

> Cc: [REDACTED]  
> Subject: RE: nTouchVP interoperability testing  
>  
> [REDACTED]  
>  
> Next Tuesday, 12/6 or Wednesday, 12/7 would work best for us. Let us know what times work for you and your team.

> Thanks!

> [REDACTED]  
>  
> [REDACTED]  
> Vice President Product Development  
> CSDVRS, LLC  
> [REDACTED] office  
> [REDACTED] cell

> -----Original Message-----

> From: [REDACTED]@sorenson.com]  
> Sent: Wednesday, November 30, 2011 4:23 PM  
> To: [REDACTED]  
> Cc: [REDACTED]  
> Subject: RE: nTouchVP interoperability testing

> Hi [REDACTED]

> Yes, please continue to coordinate through me.

> Thanks,

> -----Original Message-----

> From: [REDACTED]@zvrs.com]  
> Sent: Wednesday, November 30, 2011 7:45 AM  
> To: [REDACTED]  
> Cc: [REDACTED]  
> Subject: RE: nTouchVP interoperability testing

> [REDACTED]  
>  
> Sounds good. Let me get with my team and get back with you in regards to when we could setup time for testing. Should I continue to coordinate through you?

> Thanks!

> [REDACTED]  
>  
> [REDACTED]  
> Vice President Product Development  
> CSDVRS, LLC  
> [REDACTED] office  
> [REDACTED] cell

> -----Original Message-----

> From: [REDACTED]@sorenson.com]

> Sent: Wednesday, November 30, 2011 9:41 AM

> To: [REDACTED]

> Cc: [REDACTED]

> Subject: RE: nTouchVP interoperability testing

>

> Hi [REDACTED]

>

> I can't give you an ntouchVP for your lab, but I can arrange for you to work with one of our technicians when you want to run tests.

>

> Thanks,

> [REDACTED]

>

> -----Original Message-----

> From: [REDACTED]@zvrs.com]

> Sent: Monday, November 28, 2011 9:47 AM

> To: [REDACTED]

> Subject: nTouchVP interoperability testing

>

> [REDACTED]

>

> I hope you had a wonderful Thanksgiving holiday. My team is responsible for interoperability testing and would like to request an nTouchVP for our lab for testing purposes. Could you please point me to the correct person within Sorenson where I could acquire a nTouchVP.

>

> Thanks!

>

> [REDACTED]

>

>

>

>

> Vice President Engineering

> CSDVRS, LLC

> [REDACTED] office

> [REDACTED] cell

> [www.zvrs.com](http://www.zvrs.com)

>

>

# Attachment D

[REDACTED]

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**From:** [REDACTED]@sorenson.com]  
**Sent:** Tuesday, March 22, 2011 5:46 PM  
**To:** [REDACTED]@zvrs.com  
**Cc:** [REDACTED]  
**Subject:** RE: Interoperability between VRS devices

Hi [REDACTED]

We weren't able to catch you this afternoon on a call. Will you be available tomorrow? Our engineering team has looked at the packet capture and we're ready to talk about what we're seeing.

Kind Regards,

[REDACTED]  
Test & QA Sr Manager  
Sorenson Communications  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Tuesday, March 22, 2011 3:38 PM  
**To:** [REDACTED]  
**Subject:** Fwd: Interoperability between VRS devices

Begin forwarded message:

**From:** [REDACTED]@sorenson.com>  
**Date:** March 18, 2011 6:38:14 PM MDT  
**To:** [REDACTED]@zvrs.com>  
**Cc:** [REDACTED]@sorenson.com>  
**Subject:** RE: Interoperability between VRS devices

Hi [REDACTED]

Thank you for the email. I'll have my engineering team look into the packet capture Monday. I'll get back with you on Tuesday, if not sooner.

Have a good weekend,

[REDACTED]

---

**From:** [REDACTED]@zvrs.com]  
**Sent:** Friday, March 18, 2011 10:22 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Interoperability between VRS devices

[REDACTED]

Attached is a packet capture and what we are seeing is as follows: Our server sends out the H.225 Setup message with Called Party Number included in the Q.931 signaling, but the Sorenson gateway rejects the call with reason code "CalledPartyNotRegistered". So we need to understand why 877-[REDACTED] is not being accepted and it is in iTRS. We did see that the local number 727-[REDACTED] was not in iTRS.

Indeed, we welcome working with you and your team to get this resolved.

Regards,

[REDACTED]

[REDACTED]  
Vice President Product Development  
CSDVRS, LLC

[REDACTED] ell

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**From:** [REDACTED]@sorenson.com]

**Sent:** Tuesday, March 08, 2011 10:50 AM

**To:** 'George L. Lyon, Jr'; 'George Sutcliffe'; John Harris; 'Kelby Brick'; Lydia Runnels; 'Mark Stern'; William Banks; William Cobb

**Cc:** Mike Maddix; Scot Brooksby

**Subject:** Interoperability between VRS devices

Friends,

As you know Sorenson recently released a new PC based VRS product. As part of that release we are using a NAT/Firewall traversal server. In some of our testing we have observed that your products are only dialing using the IP address and the dialed phone number is not included in the H.323 signaling – specifically the Called Party Number field is missing. This prevents our server from properly forwarding the call to the Sorenson endpoint product. We wanted to let you know about our observations so that we can maximize interoperability between our devices and best serve our customers. Please let us know if we can provide any additional information that you may need in order to resolve this situation.

Regards,

[REDACTED]

[REDACTED]  
VP Engineering  
Sorenson Communications  
4192 South Riverboat Road  
Salt Lake City, Utah 84123  
P. 801 [REDACTED]  
C. 801 [REDACTED]

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error, please immediately notify me by reply e-mail at [REDACTED]@sorenson.com or by telephone at [REDACTED] and destroy the original transmission and its attachments without reading them or saving them to disk.

# Attachment E

[REDACTED]

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From: [REDACTED]@sorenson.com]  
Sent: Friday, April 15, 2011 5:30 PM  
To: [REDACTED]@zvrs.com  
Cc: [REDACTED]  
Subject: Re: nTouch PC Interop with Z products

Hi [REDACTED]

Our engineers have seen in the past where early implimentors of the rfc2190 diverged from the standard a little and the rtp payload header was put together a little differently than described in rfc2190. In fact, we did that with our earlier implementations of our products. Only in our later implimentations did we find out that some of the third-party libraries that we are using in some of our products don't support that divergence. Our VP200s for example would send such a stream to the ntouch PC and therefore we had the same type of interoperability problems between our two implementations.

At that time, we modified the VP200 to be able to negotiate and implement both packetization methods. We have modified our signaling to explicitly inform the remote system of the support for the rfc2190 packetization in the terminal capability set exchange (TermCapSet) and the opening of the logical channel (OLC). If the rfc2190 packetization is signaled in the termCapSet and the OLC, we use the rfc2190 header; if it isn't present in the signaling, we use the old way. The ntouch PC isn't capable of the old way but it does signal it's capability of the new way.

Some have referred to the divergent way as the "Microsoft way".

While we haven't actually pulled apart the headers that you are sending to us and verified if this is the case, it certainly seems to be likely.

We would recommend that you verify if you are sending using the divergent rtp header or the actual rfc2190 rtp header. If you are using the divergent header, it seems to us that a similar path needs to be considered in your product where you can signal and use either.

Thanks,  
[REDACTED]

-----Original Message-----

From: [REDACTED]@zvrs.com]  
Sent: Wednesday, April 13, 2011 1:25 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: RE: nTouch PC interop with Z products

[REDACTED]

Yes, we support RFC 2190. All of our endpoints implement RFC 2190 H.263 payload encapsulation (H.263 1996 video, RTP payload type 34).

We cannot solely implement RFC 2429 (H.263+ 1998 or H.263++ 2000, dynamic RTP payload type 96+) due to legacy interoperability issues with other VRS Provider's equipment.

The video issue we are experiencing with the nTouch PC implementation is that we are capable of viewing RFC 2190 (H.263 1996 video, RTP payload type 34) video generated by nTouch PC, but it is not playing the RFC 2190 (H.263 1996 video, RTP payload type 34) video streams that we are sending to it from our various endpoints.

Oddly, at least one of other VRS provider, Convo, is able to place VRS calls to the nTouch PC using what we can only guess is RFC 3984 (H.264 video). We currently are forced to strip H.264 video at our gateways due to interoperability issues with Citrix/Vidsoft's (Purple P3) implementation of H.264.

Your question begs the follow-up question: Are you seeing some divergence from RFC 2190 in the RTP stream we are sending you? We are not seeing it, but perhaps we have overlooked something that your gateway needs?

Look forward to hearing back from you.

Regards,

[REDACTED]  
[REDACTED]  
Vice President Product Development  
CSDVRS, LLC  
[REDACTED] office  
[REDACTED] cell

-----Original Message-----

From: [REDACTED]@sorenson.com]  
Sent: Tuesday, April 12, 2011 9:43 AM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: RE: nTouch PC Interop with Z products

Hi [REDACTED]

FYI - As of April 8th, Loren is no longer with Sorenson.

We are using and support the rfc2190 standard. Are you aiming for the same standard?

Regards,

[REDACTED]  
Test & QA Sr Manager  
Sorenson Communications  
[REDACTED]

-----Original Message-----

From: [REDACTED]@zvrs.com]  
Sent: Monday, April 04, 2011 12:53 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: Re: nTouch PC Interop with Z products

[REDACTED] have you made any further progress with this on your side?

We noticed the ECFS filings today, and were a bit confused based on our previous dialog:

<http://fjallfoss.fcc.gov/ecfs/comment/view?id=6016374761>  
<http://fjallfoss.fcc.gov/ecfs/document/view?id=7021236663>

Please advise as to how we can assist you further in getting the Sorenson nTouch PC to play H.263 video.

[REDACTED]  
On 3/29/11 6:59 PM, [REDACTED]@sorenson.com> wrote:

>Hi [REDACTED]  
>

>We have made some progress on this today and think we may understand  
>the issue. As I said I've been out of office today but will begin  
>working on putting something more specific when I return tomorrow.

>  
>[REDACTED]

>  
>  
>On Mar 29, 2011, at 10:06 AM, [REDACTED] wrote:

>  
>> Has there been any progress on the nTouch PC H.263/RTP inter-op with  
>>Z products?

>>  
>> Have you run into anything that we might be able to take a look at  
>>on our side?

>>  
>> Thank you for your time!

>>  
>> - [REDACTED]@zvrs.com> cell: [REDACTED]

>>  
>